



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,849	12/31/2003	Cornelis Petrus Andreas Marie Luijkx	081468-0307475	2810

909 7590 06/14/2005

PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

RUTLEDGE, DELLA J

ART UNIT	PAPER NUMBER
----------	--------------

2851

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/748,849

Applicant(s)

LUIJKX ET AL.

Examiner

D. Rutledge

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7,8,16,18-21,24,25,28,31-34,36 and 43-48 is/are rejected.
- 7) ☒ Claim(s) 3-6,9-15,17,22,23,26,27,29,30,35 and 37-42 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Declaration and Power of Attorney

1. An executed Declaration and Power of Attorney was received on 06 July 2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 18 – 21, 24, 25, 31 – 34, 36 and 43 – 48 are rejected under 35 U.S.C. 102(e) as being anticipated by Stoeldraijer et al. (US Pat. No. 6,404,499).

The reference discloses a lithographic apparatus having an attenuator which removes at least a part of the radiation (claim 1) , see Fig. 5, #51 and column 9, lines 34-47.

The attenuator is movable and the attenuator is symmetrical as defined in claimed 2.

The attenuator comprises a filter element that has an optical density that varies as a function of position along its length – claims 16.

Art Unit: 2851

The filter comprises a first and second plurality of strips that are parallel to each other and are moved in and out by different amount into the optical path. The background information discloses that anti-reflective coating aid in homogeneity of the radiation, therefore, the filter would inherently have such a coating - claims 17-21, 31 - 34.

The axis of symmetry of at least one strip of the strip may be varied individually – claim 24, 25.

The lithographic apparatus may have transmissive or reflective optical system and may be a step and scan apparatus – columns 7, lines 34-36, col. 9, lines 46-50, and 9, lines 6-9. A collector is inherently a part of a reflective mask system – claims 36, 43-48. The apparatus has a mask MA for patterning, mask holder MH and mask table Mt for supporting the patterning means; a wafer or substrate W supported by substrate holder WH and substrate table WT.

4. Claims 1, 2, 16, 36 rejected under 35 U.S.C. 102(e) as being anticipated by Nishi (US Pat. No. 6,704,090).

In Figs. 1 – 7A, the reference discloses a lithographic apparatus having the support means as claimed and an attenuating means 23a, 23b and 24 for producing a homogeneous beam – claims 1, 2, 16 and 36.

In Fig. 7a the filter are rotatable.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

Art Unit: 2851

be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi (US Pat. No. 6,704,090) or Stoeldraijer et al. (US Pat. No. 6,404,499) in view of Riordan et al. (US Pat. No. 4,837,794).

The primary references do not disclose an elongated filter wound on two reels.

The secondary arrangement discloses using a filter 58 wound on reels into spools 60 and 62 which may be used in a lithographic apparatus, col. 1, line 10.

One of ordinary skill in the art would be motivated to use such an arrangement to accommodate a filter capable of providing numerous light variations in a lithographic system.

Allowable Subject Matter

8. Claims 3 – 6, 9 – 15, 17, 22, 23, 26, 27, 29, 30, 35 and 37 – 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose or suggest at least an attenuator comprising two sheet, the sheets connect to each other at one end and one sheet capable of moving with respect to the other around a common axis.

Response Data

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Rutledge whose telephone number is (571) 272-2127. The examiner can normally be reached on Mon - Thurs, 6:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D. Rutledge
Primary Examiner
Art Unit 2851

dr
6/12/2005